



Statoil



The Story of US Offshore Wind

OCS Advisory Board: Summer Seminar

June 8, 2017

Classification: Open

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5 June 20

A Tale of Two Resources

US Offshore Oil and Gas

- First "offshore" drilling?
 - 1896
- First production?
 - 1897
- Standard block size in GoM?
 - 5,760 acres
- Lease terms in years for last sale?
 - 5, 5+3, 7+3, 10

US Offshore Wind

- First offshore wind project proposed?
 - 2001
- First lease awarded?
 - 2010
- First production?
 - December 2016
- Average lease size?
 - 107,244 acres
- Lease terms in years for last sale?
 - 1+5+25

Same Lessor, Different Leasing Process

- Non-competitive
 - Negotiate lease with BOEM
- Competitive
 - Blind, ascending, online auction
 - BOEM sets bid at each round
 - Normally 10 minutes between rounds

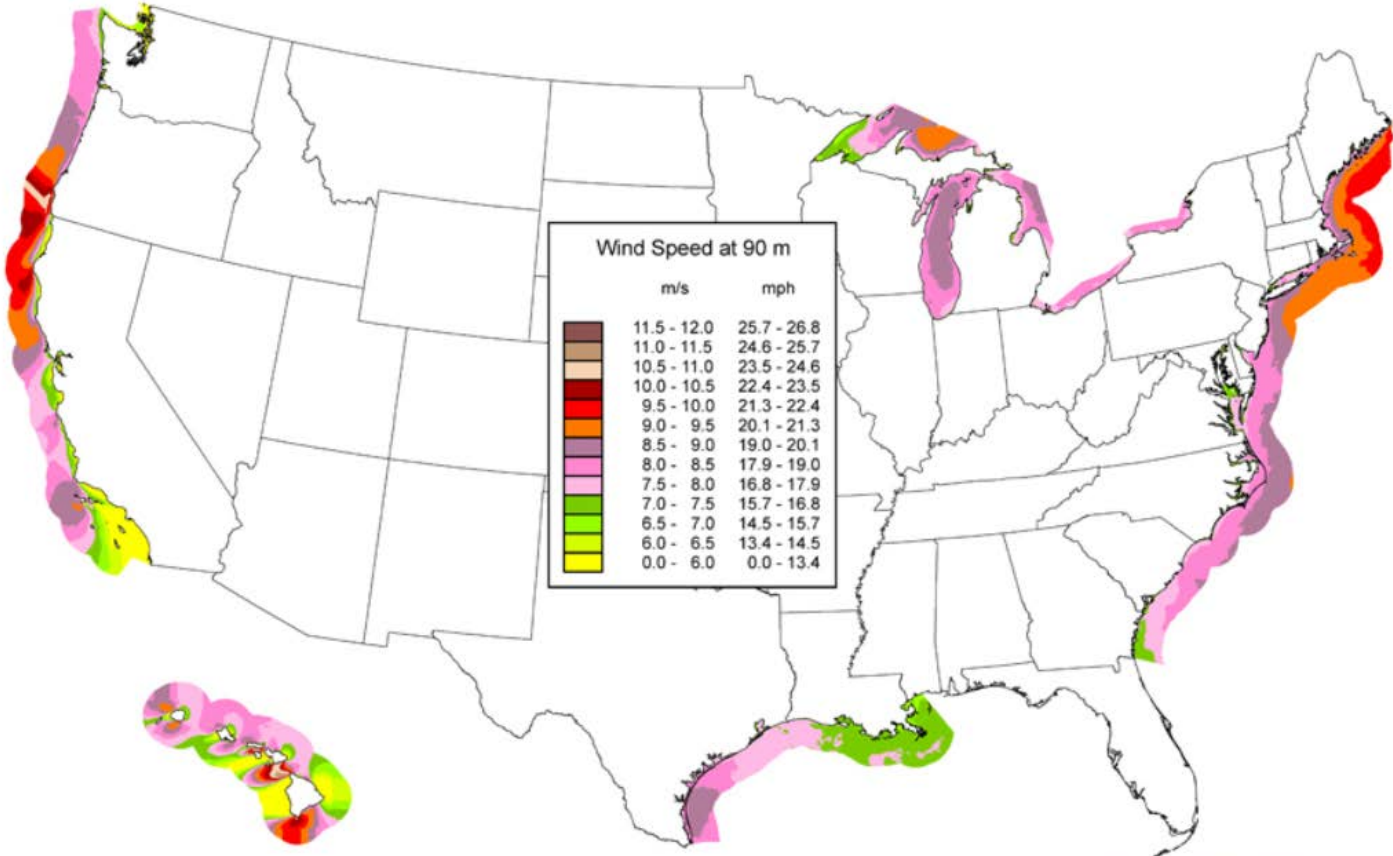
	Bidder 1	Bidder 2	Bidder 3
Minimum Bid	\$160,000	\$160,000	\$160,000
2 nd Round (\$240,000)	\$240,000	Exit Bid (\$235,000)	\$240,000
3 rd Round (\$300,000)	\$300,000	Can't Bid	Chose Not to Bid

- Minimal MLOT

Same Lessor, Different Lease

- Renewable energy lease
- June 8, 2017: Apparent high bidder
 - July 7, 2017: DOJ antitrust review
 - 10 days to sign lease, submit financial assurance after receive lease
- 1 year from effective date to submit site assessment plan
 - BOEM hasn't denied an extension request yet
- 4 ½ years from approval to submit construction and operations plan
- 25 years from approval for operations

Known Resource



Related Manufacturing

- Turbines

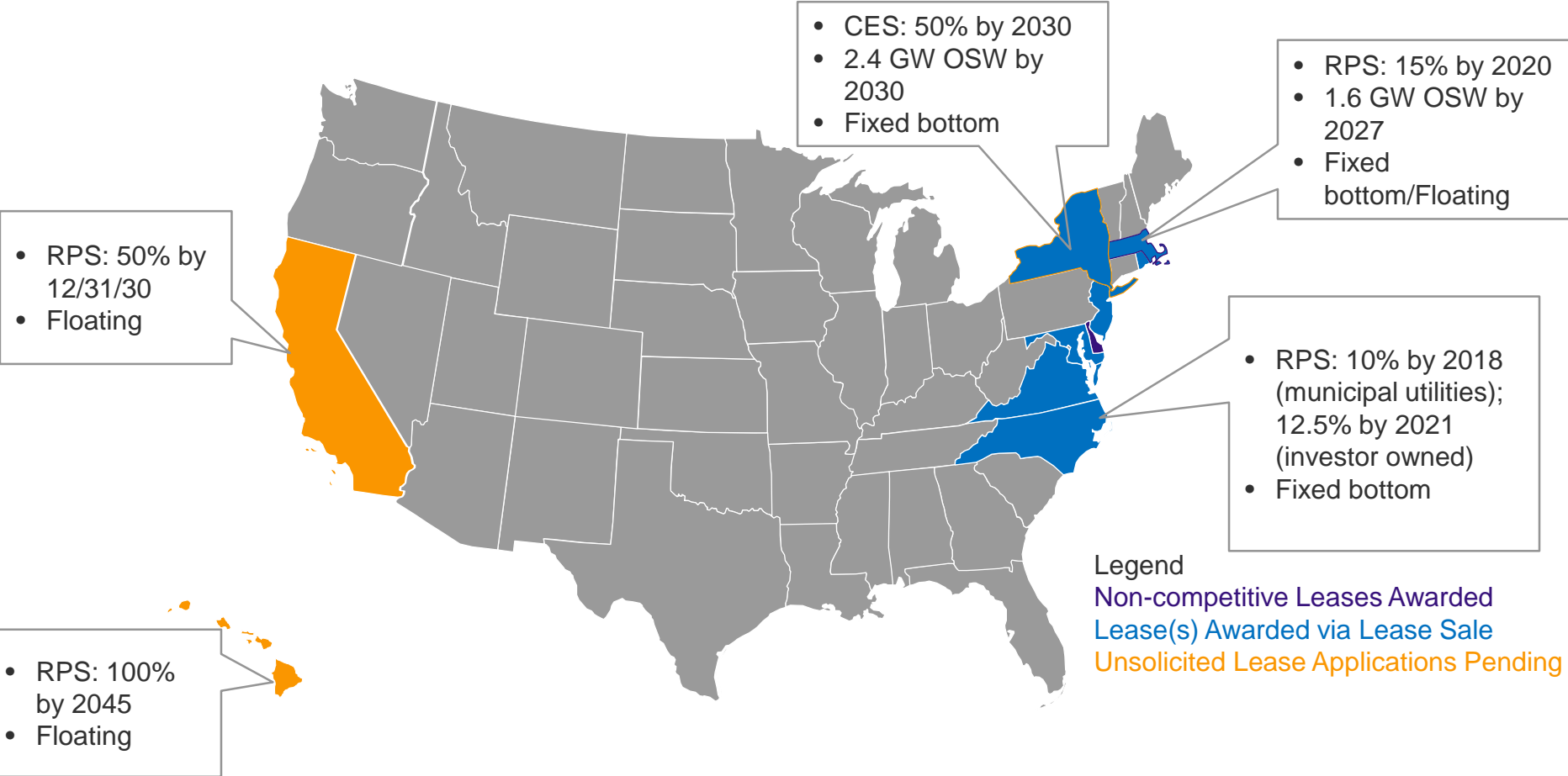
- Largest made in the US: 4 MW
 - 6 MW in the water
 - Only expected to get larger

- Substructures

- Floating: proprietary solutions
- Fixed
 - Jackets
 - Similar to oil and gas jackets, manufactured in US
 - Monopiles
 - US does not currently manufacture for offshore wind
 - Diameters great than 30 feet

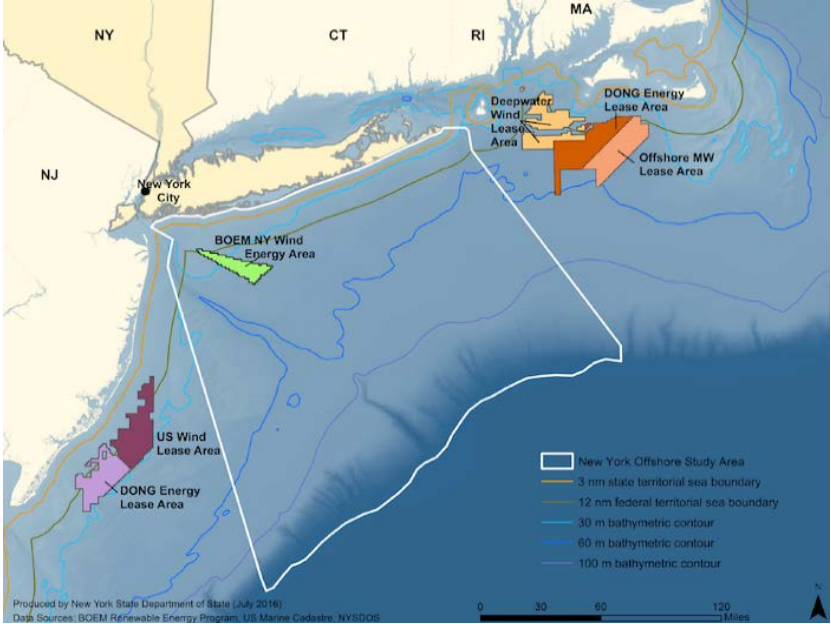


Federal Waters/State Influence



New York: A Different Ballgame

- Lease sale
 - State of New York was bidding
 - Received 10% non-monetary credit
 - Winner had the right to revoke bid in favor of New York
 - Previous high bid was \$8.7 million for 2 leases



33	Avangrid Renewables, LLC				
	DONG Energy Wind Power (U.S.) Inc.				
	Innogy US Renewable Projects LLC				
	New York State Energy Research and Development Authority	Exit	\$40,000,042	\$4,000,004	\$36,000,038
	Statoil Wind US LLC	Live	\$42,469,725		\$42,469,725
wpd offshore Alpha LLC					



Potential Game Changers

- If you build it, they will come
 - Supply chain
 - OSW turbine suppliers manufacturing in the US
 - Substructures can be built in the US
 - US flagged vessels



Q & A